

REMARKS

The Examiner allowed claims 5, 10-12, 51-62, and 67-69. Applicants gratefully acknowledge the Examiner's indication of allowed subject matter.

The Examiner rejected claims 1, 4, 47, 63-66, and 70 under 35 U.S.C. § 102(b) as allegedly being anticipated by Mochizuki 4,533,935.

The Examiner rejected claims 1, 16, 20, 23, and 47 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Basseches *et al.* 3,148,129 in view of Poisel 4,485,370.

The Examiner rejected claims 24, 49-50 and 66 under 35 U.S.C. § 103 as allegedly being unpatentable over as applied to claims 1, 16, 20, 23, 47, 63 above, and further in view of Mochizuki *et al.* 4,533,935 and skill level of an ordinary person in the art.

Applicants respectfully traverse the § 102 and § 103 rejections with the following arguments.

35 U.S.C. § 102(b)

The Examiner rejected claims 1, 4, 47, 63-66, and 70 under 35 U.S.C. § 102(b) as allegedly being anticipated by Mochizuki 4,533,935.

Applicants respectfully contend that Mochizuki does not anticipate claims 1, 4, 47, 63-66, and 70, because Mochizuki does not teach each and every feature of claims 1, 4, 47, 63-66, and 70. For example, Mochizuki does not teach the features: "wherein the gas is selected from the group consisting of a flowing gas and a non-flowing gas" (claims 1, 4, 47, 63, and 66); "wherein the gas is a flowing gas" (claims 64); and "wherein the gas is a non-flowing gas" (claim 65).

The Examiner argues: "Mochizuki teaches ... oxidizing a fraction F of a surface layer of the resistor with oxygen particles (dry oxygen) or NH₃ or nitrogen".

In response, Applicants acknowledge that Mochizuki teaches oxidizing the resistor with a gas of oxygen particles or nitrogen particles. However, Mochizuki does not teach that the gas is a flowing gas. Moreover, Mochizuki does not teach that the gas is a non-flowing gas.

Based on the preceding arguments, Applicants respectfully maintain that Mochizuki does not anticipate 1, 4, 47, 63-66, and 70, and that 1, 4, 47, 63-66, and 70 are in condition for allowance.

35 U.S.C. § 103(a): Claims 1, 16, 20, 23, and 47

The Examiner rejected claims 1, 16, 20, 23, and 47 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Basseches *et al.* 3,148,129 in view of Poisel 4,485,370.

Claims 1 and 47

Applicants respectfully contend that claims 1 and 47 are not unpatentable over Basseches in view of Poisel, because Basseches in view of Poisel does not teach or suggest each and every feature of claims 1 and 47. For example, Basseches in view of Poisel does not teach or suggest the feature: “exposing a fraction F of an exterior surface of a surface layer of the resistor to oxygen-comprising particles comprised by a gas, wherein the gas is selected from the group consisting of a flowing gas and a non-flowing gas” (claim 1); and “exposing a fraction F of an exterior surface of a surface layer of the resistor to gaseous particles comprised by a gas, wherein the gas is selected from the group consisting of a flowing gas and a non-flowing gas, wherein the gaseous particles consist of oxygen particles or nitrogen particles” (claim 47).

The Examiner argues: “Basseches *et al.* discloses ... electrolytic solution 5 comprising oxygen (water, nitric, acetic, Citric, oxalic acid, nitric acid HNO₃ containing NO₃ gas particles)”.

In response, Applicants contend that Basseches does not disclose exposing the resistor to a gas. The Examiner erroneously alleges that Basseches discloses “nitric acid HNO₃ containing NO₃ gas particles”, wherein Basseches, col. 3, lines 5-8 actually discloses that the electrolyte may comprise “nitric acid”. Applicants contend that it is well known that nitric acid is a liquid and not a gas.

Moreover, it is clear from FIG. 2 of Basseches, and the description thereof, that if the

electrolyte 5 contained a gas, the gas would escape out of the electrolyte 5 and away from the layer 3, and would therefore be incapable of reacting with a surface layer of the resistor 3 to oxidize the surface layer as required by claims 1 and 47.

In addition, Basseches does not disclose that the electrolyte solution 5 is a **flowing** gas. Moreover, Basseches does not disclose that the electrolyte solution 5 is a **non-flowing** gas.

Based on the preceding arguments, Applicants respectfully maintain that claims 1 and 47 are not unpatentable over Basseches in view of Poisel, and that claims 1 and 47 are in condition for allowance.

Claim 16

Applicants respectfully contend that claim 16 is not unpatentable over Basseches in view of Poisel, because Basseches in view of Poisel does not teach or suggest each and every feature of claim 16. For example, Basseches in view of Poisel does not teach or suggest the feature: "wherein the electrolytic reaction generates oxygen ions from the oxygen in the electrolytic solution".

The Examiner argues that Basseches, col. 2, lines 37-54 discloses the preceding feature of claim 16.

In response, Applicants assert that Basseches, col. 2, lines 37-54 does not disclose the preceding feature of claim 16. In fact, Basseches does not disclose anywhere that oxygen ions are generated during performance of Basseches' disclosed method of anodization. Basseches does not discuss or describe the electrolytic chemistry associated with Basseches' disclosed method of anodization. The Examiner has not cited a reference showing that oxygen ions would

be generated by Basseches' disclosed method of anodization for the disclosed electrolytes. Therefore, the Examiner has not established a *prima facie* case of obviousness in relation to claim 16.

Based on the preceding arguments, Applicants respectfully maintain that claim 16 is not unpatentable over Basseches in view of Poisel, and that claim 16 is in condition for allowance.

Claim 20

Applicants respectfully contend that claim 20 is not unpatentable over Basseches in view of Poisel, because Basseches in view of Poisel does not teach or suggest each and every feature of claim 20. For example, Basseches in view of Poisel does not teach or suggest the feature: "wherein the oxygen particles are selected from the group consisting of oxygen ions and an oxygen-comprising gas dissolved in the chemical solution under pressurization".

The Examiner argues that Basseches, col. 2, lines 37-54 discloses the preceding feature of claim 20.

In response, Applicants assert that Basseches, col. 2, lines 37-54 does not disclose the preceding feature of claim 20. In fact, Basseches does not disclose anywhere that oxygen ions or dissolved oxygen-comprising gas under pressurization exist during performance of Basseches' disclosed method of anodization. Basseches does not discuss or describe the electrolytic chemistry associated with Basseches' disclosed method of anodization. The Examiner has not cited a reference showing that oxygen ions or dissolved oxygen-comprising gas under pressurization would exist during performance of Basseches' disclosed method of anodization for the disclosed electrolytes. Therefore, the Examiner has not established a *prima facie* case of

obviousness in relation to claim 20.

Based on the preceding arguments, Applicants respectfully maintain that claim 20 is not unpatentable over Basseches in view of Poisel, and that claim 20 is in condition for allowance.

Claim 23

Applicants respectfully contend that claim 23 is not unpatentable over Basseches in view of Poisel, because Basseches in view of Poisel does not teach or suggest each and every feature of claim 23. For example, Basseches in view of Poisel does not teach or suggest the features: "providing a predetermined target resistance in terms of a value R_t and a tolerance ΔR_t for the electrical resistance of the resistor; ... testing the resistor during the oxidizing step to determine whether the electrical resistance of the resistor is within $R_t \pm \Delta R_t$ ".

The Examiner argues: "Basseches et al. discloses ... testing (monitoring with monitor means 10) the resistor 3 during the oxidizing step to determine the desired resistance has been attained, col. 2, lines 39-55".

In response, Applicants assert that Basseches, col. 2, lines 39-55 does not disclose the preceding feature of claim 23. Although Basseches teaches continuous monitoring to determine when the desired resistance has been attained, Basseches does not disclose providing a predetermined tolerance ΔR_t and utilizing the predetermined tolerance ΔR_t to determine when the desired resistance has been attained as required by claim 23.

Based on the preceding arguments, Applicants respectfully maintain that claim 23 is not unpatentable over Basseches in view of Poisel, and that claim 23 is in condition for allowance.

35 U.S.C. § 103(a): Claims 24, 49-50, and 66

The Examiner rejected claims 24, 49-50, and 66 under 35 U.S.C. § 103 as allegedly being unpatentable over as applied to claims 1, 16, 20, 23, 47, 63 above, and further in view of Mochizuki *et al.* 4,533,935 and skill level of an ordinary person in the art.

Applicants maintain that the preceding grounds for rejecting claims 24, 49-50 and 66 is ambiguous and thus improper because the Examiner failed to state a reference over which claims 24, 49-50, and 66 are being rejected. Applicants are assuming that the aforementioned rejection of claims 24, 49-50, and 66 is over Basseches *et al.* 3,148,129 in view of Poisel 4,485,370, and further in view of Mochizuki *et al.* 4,533,935 and skill level of an ordinary person in the art.

Claim 24

Since claim 24 depends from claim 23, which Applicants have argued *supra* to not be unpatentable over Basseches in view of Poisel under 35 U.S.C. § 103(a), Applicants maintain that claim 24 is likewise not unpatentable over Basseches in view of Poisel and further in view of Mochizuki and skill level of an ordinary person in the art under 35 U.S.C. § 103(a).

In addition, Applicants respectfully contend that Basseches in view of Poisel and further in view of Mochizuki and skill level of an ordinary person does not teach or suggest the following features of claim 24:

"wherein if during the testing step the electrical resistance of the resistor is determined to not be within $R_t \pm \Delta R_t$, then the method further comprises:

iterating such that each iteration of the iterating includes additionally executing the exposing and oxidizing steps and additionally testing the resistor during the oxidizing step to determine whether R_2 " is within $R_t \pm \Delta R_t$, wherein R_2 " is a latest value of the

electrical resistance of the resistor as determined by said testing; and
 ending the iterating if R_2'' is within $R_1 \pm \Delta R_1$ or if $(R_2'' - R_1)(R_1 - R_2'') < 0$,
 wherein R_1 is a latest value of the determined electrical resistance of the resistor
 immediately prior to said testing.”

The Examiner has not even addressed the preceding features of claim 24 and has therefore not established a *prima facie* case of obviousness in relation to claim 24.

Based on the preceding arguments, Applicants respectfully maintain that claim 24 is not unpatentable over Basseches in view of Poisel and further in view of Mochizuki and skill level of an ordinary person in the art, and that claim 24 is in condition for allowance.

Claims 49-50

Since claims 49-50 depend from claim 23, which Applicants have argued *supra* to not be unpatentable over Basseches in view of Poisel under 35 U.S.C. §103(a), Applicants maintain that claims 49-50 are likewise not unpatentable over Basseches in view of Poisel and further in view of Mochizuki and skill level of an ordinary person in the art under 35 U.S.C. §103(a).

In addition, Applicants respectfully contend that Basseches in view of Poisel and further in view of Mochizuki and skill level of an ordinary person does not teach or suggest the following features of claims 49-50: “wherein $F < 1$ ” (claim 49); and “wherein $F \approx 1$ ” (claim 50).

The Examiner has not even addressed the preceding features of claims 49-50 and has therefore not established a *prima facie* case of obviousness in relation to claims 49-50.

Based on the preceding arguments, Applicants respectfully maintain that claims 49-50 are not unpatentable over Basseches in view of Poisel and further in view of Mochizuki and skill level of an ordinary person in the art, and that claims 49-50 are in condition for allowance.

Claim 66

Since claim 66 depends from claim 23, which Applicants have argued *supra* to not be unpatentable over Basseches in view of Poisel under 35 U.S.C. §103(a), Applicants maintain that claim 66 is likewise not unpatentable over Basseches in view of Poisel and further in view of Mochizuki and skill level of an ordinary person in the art under 35 U.S.C. §103(a).

In addition, Applicants respectfully contend that Basseches in view of Poisel and further in view of Mochizuki and skill level of an ordinary person does not teach or suggest the following feature of claim 66: “wherein a dimension of the resistor does not exceed about 1 micron”.

The Examiner argues: “Mochizuki teaches at col. 5, lines 113, forming a resistor portion of less than 1 micron ... It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above references’ teachings with a resistor less than 1 micron because the dimension of a resistor determine the resistance of a resistor and such resistance value is taken to be obvious since these are variables of art recognized importance which are subject to routine experimentation and optimization and discovery of an optimum value for a known process is obvious.”

In response, Applicants respectfully contend that the Examiners argument for modifying Basseches to incorporate the preceding feature of claim 66 is not persuasive, because the Examiner has not demonstrated motivation in the prior art for setting an upper limit of 1 micron specifically for a dimension of the resistor.

CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account No. 09-0457.

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